

IN THE CLAIMS

This claim listing replaces all previous claims.

1. (Currently amended) A molecular mechanism for gene containment in sexually reproducing transgenic plants by providing a plant with a recoverable block of function (RBF) system, said system comprising:
  - a transgene of interest (TGI) encoding desired gene products;
  - a blocking construct (BC) having a capacity to block at least one molecular or physiological function essential for development or reproduction of the transgenic plant, thereby leading to death or incapacity of sexual reproduction, said BC being fully ~~or partially~~ inserted into an intron of the TGI, said BC comprising a barnase coding sequence, and being operably linked to an embryo/ germination specific promoter; and
  - an externally controllable recovering construct RC being able to recover the functions blocked by the BC, said RC comprising a barstar coding sequence and being operably linked to a heat shock promoter.
2. (Original) The mechanism according to claim 1, wherein the BC and the RC are located in different chromosomes.
3. (Original) The mechanism according to claim 1, wherein the BC and the RC are located in same inserts.

4. (Canceled)
5. (Currently amended) The mechanism according to claim [4]\_1, wherein the barnase is encoded by a synthetic nucleotide sequence comprising SEQ ID NO:1.
6. (Currently amended) The mechanism according to claim [4]\_1, wherein the barstar is encoded by a synthetic nucleotide sequence comprising SEQ ID NO: 2.
7. (Original) The mechanism according to claim 1, wherein the BC and the TGI are positioned in different directions.
8. (Original) The mechanism according to claim 1, wherein the BC and TGI are positioned in same direction and are sharing a polyadenylation site.
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)

14. (Canceled)

15. (Currently amended) The mechanism according to claim [14] 1, wherein the embryo/germination specific promoter is SH-EP promoter.

16. (Original) The mechanism according to claim 1, wherein the TGI is driven by an inducible or constitutive promoter.

17. (withdrawn) The mechanism according to claim 16, wherein the promoter is a chemically inducible promoter.

18. (withdrawn) The mechanism according to claim 17, wherein the promoter is salicylate inducible promoter.

19. (withdrawn) The mechanism according to claim 16, wherein the promoter is a physically inducible promoter.

20. (withdrawn) The mechanism according to claim 1, wherein the TGI driven by a 35S3T promoter with three tet operators, said tet operators being repressed by a product of a *tetR* gene expressed under a 35S promoter.

21. (Currently amended) A complex of DNA constructs comprising:

a TGI encoding desired gene products;  
a BC having a capacity to block at least one molecular or physiological function essential for development or reproduction of the a transgenic plant containing said BC, thereby leading to death or incapacity of sexual reproduction, said BC being inserted fully or partially into an intron of the TGI, said BC comprising a barnase coding sequence and being operably linked to an embryo/ germination specific promoter; and

an externally controllable RC being able to recover the functions blocked by the BC, said RC comprising a barstar coding sequence and being operably linked to a heat shock promoter.

22. (Original) The complex of DNA constructs according to claim 21, wherein the BC and the RC are located in different chromosomes.
23. (Original) The complex of DNA constructs according to claim 21, wherein the BC and the RC are located in same inserts.
24. (Canceled)
25. (Currently amended) The complex of DNA constructs according to claim 21, wherein the barnase is encoded by a nucleotide sequence comprising [es] the SEQ ID NO:1.

26. (Currently amended) The complex of DNA construct according to claim 21, wherein the barstar is encoded by a nucleotide sequence comprising[es] the SEQ ID NO:2.
27. (Original) The complex of DNA constructs according to claim 21, wherein the BC and the TGI are in different directions.
28. (Original) The complex of DNA constructs according to claim 21, wherein the BC and TGI are positioned in same direction and share a polyadenylation site.
29. (Canceled)
30. (Canceled)
31. (Canceled)
32. (Canceled)
33. (Canceled)
34. (Canceled)

35. (Currently amended) The complex of DNA constructs according to claim [34] 21, wherein the embryo/germination specific promoter is SH-EP promoter.
36. (Original) The complex of DNA constructs according to claim 21, wherein the TGI is driven by an inducible or constitutive promoter.
37. (withdrawn) The complex of DNA constructs according to claim 36, wherein the promoter is a chemically inducible promoter.
38. (withdrawn) The complex of DNA constructs according to claim 36, wherein the promoter is a physically inducible promoter.
39. (withdrawn) The complex of DNA constructs according to claim 37, wherein the promoter is salicylate inducible promoter.
40. (withdrawn) The complex of DNA constructs according to claim 21, wherein the TGI is driven by a 35S3T promoter with three tet operators, said tet operators being repressed by a product of a *tetR* gene expressed under a 35S promoter.
41. (Original) A transgenic plant comprising the complex of DNA constructs according to claim 21.

42. (Original) A transgenic cell line comprising the complex of DNA constructs according to claim 21.